IN THE **CLAIMS:**

1. (Previously Presented) A human/machine interface for a machine vision system having an image element that generates image data based upon a viewed object comprising:

a processing element and a memory operatively connected to the image element and including (a) a machine vision tool for performing a machine vision process on the image data and (b) a software process for transmitting, in a web-browser compatible form, the image data and information from the machine vision tool over a communications interface, interconnected to the processing element, to a human/machine interface device having a display, the web-browser-compatible image data and information being adapted for display on the human/machine interface device, and wherein the human/machine interface device is adapted to display the web-browser-compatible image data and information on a plurality of user-selected screens associated with the machine vision tool, the screens being constructed and arranged for selecting functions for training the machine vision system to define measured parameters of the viewed object and at least one of installing, configuring, monitoring, and controlling the machine vision system, and wherein the processing element is adapted to perform a machine vision tool task while the human/machine interface device is disconnected from the communications interface; and

wherein the processing element includes a web server to allow the human/machine interface to setup and control the processor, and wherein the human/machine interface device comprises a computer having a generic web browser and the screens comprise web pages.

2. (Cancelled)

3. (Original) The human/machine interface as set forth in claim 1 wherein the software process includes a data compression and reformatting process for the image data that

3 causes the image data to be transmitted in compressed form over the
4 communications interface.

4. (Previously Presented) A human/machine interface for a machine vision system having
2 an image element that generates image data based upon a viewed object comprising:
3 a processing element and a memory operatively connected to the image element
4 and including (a) a machine vision tool for performing a machine vision process on the
5 image data and (b) a software process for transmitting the image data and information from
6 the machine vision tool over a communications interface, interconnected to the processing
7 element, to a human/machine interface device having a display, and the image data and
8 information being adapted for display on the human/machine interface device, and wherein
9 the human/machine interface device is adapted to display the image data and the
10 information on a plurality of user-selected screens associated with the machine vision tool,
11 the screens being constructed and arranged for selecting functions for training the machine
12 vision system to define measured parameters of the viewed object and at least one of
13 installing, configuring, monitoring, and controlling the machine vision system and wherein
14 the processing element is adapted to perform a machine vision tool task while the
15 human/machine interface device is disconnected from the communications interface;
16 and

17 wherein the processing element includes an interface element in the camera to
18 allow the human/machine interface to setup and control the processor from a remote
19 location, and the human/machine interface device comprises a personal digital
20 assistant (PDA).

5. (Original) The human/machine interface as set forth in claim 4 wherein the communi-
2 cation interface includes support for data transmission to a PDA over one of a wireless
3 link and a cable link.

6. (Original) The human/machine interface as set forth in claim 4 wherein the hu-
2 man/machine interface device includes a generic machine vision application residing

thereon and the processing element is adapted to install a specialized machine vision application over the communications interface to the human/machine interface device.

7. (Original) The human/machine interface as set forth in claim 4 wherein the machine vision tool includes a process that determines an intensity distribution of the image data and that transmits information with respect to the determined intensity distribution, and wherein the human/machine interface device includes a process for displaying, based upon the information a visual representation of the intensity distribution so as to assist in adjusting at least one of lighting intensity, shutter exposure time, lens aperture, and parameters affecting the intensity distribution in the image data.

8. (Original) The human/machine interface as set forth in claim 4 wherein the machine vision tool includes a process that determines a relative degree of focus of the image data and that transmits encoded information with respect to the determined relative degree of focus, and wherein the human/machine interface device includes a process for displaying, based upon the encoded information, a current focus value so as to assist in adjusting focus.

9. (Original) The human/machine interface as set forth in claim 8 wherein the current focus value is displayed as a function of time.

10. (Original) The human/machine interface as set forth in claim 8 wherein the human/machine interface device includes a display that is insufficient in resolution and refresh rate to provide a real time display for adjusting either of focus or aperture of lens of the image element.

11. (Original) The human/machine interface as set forth in claim 4 wherein the software process includes a data compression and reformatting process for the image data that causes the image data to be transmitted in compressed form over the communications interface.

12. (Previously Presented) A method for interfacing with a machine vision system having an image element that generates image data based upon a viewed object, the method comprising the steps of:

provising a processing element and a memory operatively connected to the image element and including (a) a machine vision tool for performing a machine vision process on the image data and (b) a software process for providing the image data in a web-browser-compatible form and for creating information for constructing interface web pages associated with operation of the machine vision tool;

transmitting the image data and information over a communications interface, interconnected to the processing element, to a human/machine interface device having a display and a generic web browser application;

receiving the image data and information and displaying, on the human machine interface device, the image data and information on a plurality of user-selected screens, the screens comprising web pages constructed and arranged for selecting functions for training the machine vision system to define measured parameters of the viewed object and at least one of installing, configuring, or monitoring the machine vision system where the human/machine interface connects remotely to setup and control the processor through a web server residing within the camera; and

performing, with the processing element, a machine vision tool task while the human/machine interface device is disconnected from the communications interface.

13. (Original) The method as set forth in claims 12 wherein further comprising transferring configuration information from the human/machine interface device to the memory over the communications interface.

14. (Original) The method as set forth in claim 13 wherein the step of transferring configuration information includes providing training information to the memory.

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15. (Original) The method as set forth in claim 14 wherein the step of displaying includes monitoring a live image acquired by the image element based upon the image data and information.

16. (Cancelled)

17. (Currently Amended) The method as set forth in claim 12 wherein the step of establishing the link comprises opening web pages on the human/machine interface based upon a web server in the machine vision system that interacts with the communications interface to convert the image data and information into web-based data paeckets.

18. (Original) The method as set forth in claim 12 further comprising communicating control information to a remote device through the communication interface so as to direct a device function in accordance with the predetermined instruction of the machine vision tool.

19. (Original) The human/machine interface as set forth in claim 12 wherein the software process includes a data compression and reformatting process for the image data that causes the image data to be transmitted in compressed form over the communications interface.

20. (Currently Amended) A method for interfacing with a machine vision system having an image element that generates image data based upon a viewed object, the method comprising the steps of:

    providing a processing element and a memory operatively connected to the image element and including (a) a machine vision tool for performing a machine vision process on the image data and (b) a software process for providing the image data in a transmittable form and for creating information for constructing interface screens associated with operation of the machine vision tool;

9   transmitting the compressed and reformatted image data and information over a

10   communications interface, interconnected to the processing element, to a human/machine

11   interface device, the human/machine interface comprising a personal digital assistant

12   (PDA) having a display and a graphical user interface (GUI);

13   receiving the compressed and reformatted image data and information and dis-

14   playing, on the human machine interface device, the compressed and reformatted image

15   data and information on a plurality of user-selected screens associated with the machine

16   vision tool, the screens being constructed and arranged for selecting functions for training

17   the machine vision system to define measured parameters of the viewed object and at least

18   one of installing, configuring, monitoring, and controlling the machine vision system,

19   where the human/machine interface connects remotely to setup and control the processor

20   through ~~a web server~~an interface element within the camera; and

21   performing, with the processing element, a machine vision tool task while the

22   human/machine interface device is disconnected from the communications link.

21. (Original) The method as set forth in claim 20 wherein the step of transmitting in-

2   cludes providing the image data and information over one of a wireless link and a cable

3   link.

22. (Cancelled)

23. (Original) The method as set forth in claim 20 further comprising transferring

2   a machine vision application from the memory over the link to the human

3   machine interface device and installing the loadable machine vision application

4   on the human/machine interface so as to interface with the machine vision system

5   using the loadable machine vision application.

24. (Original) The method as set forth in claim 20 further comprising communicating

2   control information to a remote device through the communication interface so as to di-

³ rect a device function in accordance with a predetermined instruction of the
⁴ machine vision tool.

25. (Original) The human/machine interface as set forth in claim 20 further
² comprising determining, with the machine vision tool, an intensity distribution of
³ the image data and transmitting information with respect to the determined
⁴ intensity distribution, and displaying, based upon the information, a visual
⁵ representation of the intensity distribution with the human/machine interface device
⁶ so as to assist in adjusting at least one of lighting intensity, shutter exposure time,
⁷ lens aperture, and parameters affecting the intensity distribution in the image data.

26. (Original) The human/machine interface as set forth in claim 20 further comprising
² determining, with the machine vision tool, a relative degree of focus of the image data and
³ transmitting encoded information with respect to the determined relative degree of focus,
⁴ and displaying, based upon the encoded information, a current focus value with the
⁵ human/machine interface device so as to assist in adjusting focus.

27. (Original) The human/machine interface as set forth in claim 26 wherein the step of
² displaying the current focus value includes displaying the current focus value as a func-
³ tion of time.

28. (Original) The human/machine interface as set forth in claim 20 wherein the software
² process includes a data compression and reformatting process for the image data that
³ causes the image data to be transmitted in compressed form over the communications in-
⁴ terface.

29. (Previously Presented) A machine vision tool with a human/machine interface device,
² comprising:
³ the machine vision tool including a camera for collecting image data of an object,
⁴ wherein the image data includes evaluation of the object;

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5   a processor coupled into the machine vision tool, wherein the processor includes a

6   web server, and a software process adapted to transmit the image data as a web-browser-

7   compatible form to the unconnected human/machine interface device, and wherein the

8   processor and the machine vision tool are adapted to perform a machine vision tool task

9   while the human/machine interface device is unconnected from the processor and ma-

10   chine vision tool; and

11   the human/machine interface device using a web-browser set of screens, the set of

12   screens constructed and arranged to for selecting functions for training the machine vi-

13   sion system to define measured parameters of the viewed object and at least one of in-

14   stalling, configuring, monitoring, and controlling the machine vision system, and where

15   the human/machine interface is adapted to setup and control the processor through the

16   web server using a wireless connection.

30. (Previously Presented) The machine vision system of claim 1, wherein training fur-

2   ther includes defining a predetermined threshold for detecting when the measured pa-

3   rameters are outside a defined range.

31. (Previously Presented) The machine vision system of claim 4, wherein training further

2   includes defining a predetermined threshold for detecting when the measured parameters

3   are outside a defined range.

32. (Previously Presented) The method for interfacing with a machine vision system of

2   claim 12, wherein training further includes defining a predetermined threshold for detecting

3   when the measured parameters are outside a defined range.

33. (Previously Presented) The method for interfacing with a machine vision system of

2   claim 20, wherein training further includes defining a predetermined threshold for detecting

3   when the measured parameters are outside a defined range.

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34. (Previously Presented) The machine vision tool of claim 29, wherein training further includes defining a predetermined accept/reject threshold with respect to the defined shape of the viewed object.